VEGF and NOTCH in blood vessels, an intricate and fascinating interplay

Stellingen behorende bij het proefschrift

**"VEGF and NOTCH in BLOOD VESSELS,
an INTRICATE and FASCINATING INTERPLAY"**

1. VEGFR-2, not VEGFR-1, mediates VEGF induced Notch activation in endothelial cells. *(This thesis)*

2. The ability of activated NOTCH to specifically induce the expression of its own ligand Dll4 provides endothelial cells with a mechanism to propagate Notch signaling. *(This thesis)*

3. VEGF induced ADAM10 expression and activity provides an alternative mechanism by which VEGF can potentiate Notch receptor prior to and possibly independent of ligand overexpression. *(This thesis)*

4. VEGF-signaling in ECs can upregulate the expression of members of the Notch-signaling family, which instruct ephrinB2 expression and define arterial differentiation. *(This thesis)*

5. The NOTCH signaling pathway, as regulator of SMC proliferation and migration, is involved in neointima formation. *(This thesis)*

6. VEGF and NOTCH induced Dll4 expression is independent of FOXC transcription factors in endothelium. *(This thesis)*

7. Notch signaling is an ancient intercellular signaling mechanism that plays myriad roles during vascular development and physiology in vertebrates. *(Roca and Adams, Genes Dev. 2007)*

8. Differential *Vegfr* levels affect tip cells selection only in the presence of a functional Notch system by modulating the expression of the ligand Dll4. *(Jakobsson et al, Nature Cell Biology, 2010)*

9. Experience is the name everyone gives to their mistakes. *(Oscar Wilde)*

10. If you steal from one author, it's plagiarism; if you steal from many, it's research. *(Wilson Mizner)*

11. Research is what I'm doing when I don't know what I'm doing. *(von Braun)*

Vincenza Caolo, the 11th of May 2011